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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/614,008	07/08/2003	Shinji Murashige	43888-255	9527

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WASHINGTON, DC 20005-3096

EXAMINER

FANTU, YALKEW

ART UNIT	PAPER NUMBER
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2838

DATE MAILED: 09/29/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/614,008	MURASHIGE ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Yalkew Fantu	2838	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 11 September 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 April 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

This action replaces the previous final rejection of 05/10/2006 in order to clarify the examining position, with a new statutory period, to run from the mailing date of this action.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 4, 5, 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sato (US 5,294,496) in view of Okumura (US 5,608,304).

With respect to claims 1, 5 and 10, Sato discloses a portable power source (Fig. 1 and Col. 1 line 46-48), comprising a battery pack for accommodating at least one secondary battery (Fig. 1 and Fig. 4A element 12), and a mounting part for mounting said battery pack (Fig. 4A element 10 and Col.1 line 22-24). Said mounting part comprising a protruding terminal (Fig. 4A element 14) for connecting with terminals (Fig. 4A element 14 and 16) being disposed in a concealed disposition (Col. 2 item 51, Fig. 4A items 18 and 24, Col. 2 line 49-52). Said battery pack (Fig.4A element 12) being movable (Col. 2 elements 53-54) from an initial position to a fixing position. Said external terminal has been inserted and connect at fixing position (Figs. 4A and 4B elements 18,24,22 and 26); and inserting direction is directly opposite to the direction implied by slidable from the initial to the final position. (See Fig. 4A, directions designated by arrows "a" and "b"). But, Sato does not disclose the charging circuit,

discharging circuit and control circuit. Okumura, however, teaches a battery pack comprising a charging circuit (Col. 1 line 64) and a control circuit (Fig. 1 element 45).

Okumura, however, teaches a battery pack comprising a charging circuit (Col. 1 line 64) and a control circuit (Fig. 1 element 45), and a discharging circuit in order to properly charge and protect the battery (see col. 1, lines 30-32).

Sato and Okumura are analogous art, because they are from the same field of endeavor namely a battery pack and apparatus using the battery pack.

At the time of invention it would have been obvious to a person of ordinary skill to provide a charging and controlling circuit to Sato's portable power apparatus, as taught by Okumura, in order to properly charge and control the charging activities.

The suggestion or motivation for doing would have been that the charging circuit charges the battery pack to maintain the power use and the charge controlling circuit controls voltage and current during charging to avoid overcharging.

Therefore it would have been obvious to combine Sato with Okumura for the benefit of having a portable battery pack with rechargeable power source as specified in claim 1.

With respect to claim 2, Sato further discloses portable power source in accordance with claim 1, wherein said charge and discharge terminal comprise both positive and negative terminals (Col.2 line 39-46).

With respect to claim 4, Sato discloses the portable power source in accordance with claim 1 as set forth above, however, doesn't disclose expressly wherein said charge circuit further comprise a thermal protector.

Okumura, however, discloses a thermal protector, such as a thermal fuse (Fig. 2 element 42 and col.2 lines 13 and 17).

At the time of the invention it would have been obvious to a person of ordinary skill to provide the portable power apparatus of Sato with a thermal protector as taught by Okumura.

The suggestion or motivation for doing would have been that the use of this thermal protector is to safeguard the battery power circuit from being damaged by excessive heat produced at the result of too much charge as taught by Okumura in col. 2 lines 13-18.

Therefore it would have been obvious to combine Okumura with Sato for the benefit of forming portable power source with a thermal protector to obtain the invention as specified in claim 4.

For claim 9, the whole device is rotatable.

Claims 3, 6, 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sato (US 5,608,304) in view of Nagano et al (US 5,872,444).

With respect to claim 3, 6 and 7, Sato discloses a portable power source in accordance with claim 1 as set forth above in the 35 USC 103 rejection above, however, does not disclose expressively that the portable power source has a thermistor, and a lithium-ion secondary battery, nor the charging circuit, control circuit and discharging circuit.

The Nagano et al. reference, however, discloses a power source with a thermistor, a lithium-ion secondary battery, control circuit, charging and discharging circuits (figs. 1, 2 and 4) in order to properly charge a battery like that of Sato.

With respect claim 3, Nagano et al. discloses a thermistor (Col. 9 line 28)

With respect to claim 6, Nagano et al discloses a positive terminal (TM1+) and a negative terminal (TM1-) charging of the battery-charging device, which is not concealed. (Fig. 1; col. 3 number 38-41)

With respect to claim 7, Nagano et al. discloses lithium-ion batteries (col.1line11).

With respect to claim 8 Nagano et al. discloses the portable power source for different electronics (Col. 1 line 7 and 8).

Sato and Nagano et al. are analogous art because they are from the same field of endeavor, namely portable power source.

At that time of the invention, it would have been obvious to a person of ordinary skill in the art, to have added a thermistor, charge terminals not concealed, a lithium-ion battery, and power source for electronic devices to the "portable electric power apparatus" of Sato in view of the teachings of Nagano et al.

The suggestion and motivation for doing so would have been obvious in view of the teaching of Nagano et al. in Col. 9 line 28 by adding a thermistor to the portable electric power apparatus it could be used to detect the temperature of the batteries during charging before exposed to an over-heating damage.

In addition to that, as in view of Nagano's teaching in Col. 1 line 11, by adding a lithium-ion battery type it could also be advantageous to use the power apparatus relatively for longer period of time.

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify Sato's apparatus and include a temperature sensor as disclosed by Nagano et al. in order to avoid such a temperature-dependent irreversibility deterioration of the battery.

### ***Response to Arguments***

Applicant's arguments with respect to claims 1-8 filed on 09/11/2006 have been fully considered but they are not persuasive.

Applicant argues that Sato does not disclose that the battery pack is movable once the external terminal 14 has been inserted in said inserting part. This is not correct for two reasons. One, the whole pack is always movable. Two, the insertion need not be all the way. One can insert the terminal part of the way to the fixing position. As to claim 9, Haga is removed as prior art, for reason mentioned, see the rejection above.

For claim 10, applicant also argues that motion "b" of Sato relates to the removal of the battery pack 12 so as to effect a disconnection of the terminals. This argument is incorrect because it is not referring to the complete statements of the reference, Sato, regarding the insertion and disconnection of the battery in order to show the relative movement of the battery pack. As applicant indicated, Sato discloses motion "b" to remove the battery pack. The reference also discloses the motion "a" to indicate the

relative motion of the battery pack to effect connection of the terminals (see fig. 4B; col. 2, lines 36-37).

In addition to that, Sato also discloses inserting direction is directly opposite to the direction implied by slidable from the initial to the final position. (See Fig. 4A, directions designated by arrows "a" and "b") in reply to applicant's new added claim 10.

Final necessitated by amendment.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yalkew Fantu whose telephone number is 571-272-8928. The examiner can normally be reached on M - F; 7- 4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Karl D. Eastom can be reached on 571-272-1989. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Art Unit: 2838

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



KARL EASTHOM  
SUPERVISORY PATENT EXAMINER